

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method of obtaining an image of a buried structure in an object comprising:

- providing a camera for imaging visual and infrared-images;
- providing a bounded infrared light source;
- partly irradiating said object by said bounded infrared light source;
- imaging an area of said object, by said camera, that is not irradiated by said bounded infrared light source to create an image of said buried structure; and
- combining said image of said buried structure with a visual image of said object;
- aligning said bounded infrared light source with a visual light source;
- providing a first edge analysis of an infrared light source image;
- providing a second edge analysis of a visual light source image;
- comparing a first set of edges detected during said first edge analysis with a second set of edges detected during the second edge analysis; and
- discarding, based on the comparing the first set and second set of images, edges detected in the infrared light source image that are also detected in the visual light source image.

2. (Previously presented) A method according to claim 1 wherein irradiation of said object, during the partly irradiating step, is varied in location over time so as to provide a full image by subsequently combining partial images rendered during multiple iterations of the imaging step.

3. (Previously presented) A method according to claim 1, wherein said image of said buried structure is obtained by scanning a light beam over said object.

4. (Previously presented) A method according to claim 1, wherein said image of said buried structure is obtained by subsequently irradiating said object in predetermined patterns.

5. (Previously presented) A method according to claim 4, wherein said predetermined patterns are complementary patterns.

6. (Currently amended) A method according to claim 4, wherein said predetermined patterns comprise any one or more of the ~~following~~group consisting of: matrix-patterns, line patterns, dot patterns ~~or~~and concentric patterns.

7. (Previously presented) A method according to claim 4, wherein said object is partly irradiated only at predetermined positions that are spaced apart.

8. (Previously presented) A method according to claim 1, wherein said camera is a CMOS-camera.

9. (Canceled).

10. (Currently amended) A method according to claim 91 further comprising the step of correcting said infrared image to discard saturated image areas.

11. (Previously presented) A method according to claim 1, wherein said image of said buried structure and visual image are provided stereoscopically.

12. (Currently amended) A method according to claim 91, wherein said infrared image is spectrally analyzed, and wherein said spectral analysis is projected into said visual image.

13. (Previously presented) A method according to claim 12, wherein said spectral analysis comprises a pulsatility analysis and/or a heart beat frequency analysis and/or respiratory frequency analysis.

14. (Previously presented) A method of enhancing imaging of a buried structure in an object, comprising:

providing a first light source for providing first light of a wavelength that images said buried structure;

providing a second light, aligned with said first light, of a wavelength that visually images said object;

obtaining a first image by irradiating said object with said first light;

providing an edge analysis of said first image to detect edges of said buried structure;

obtaining a second image by irradiating said object with said second light;
providing an edge analysis to detect edges in said second image;
comparing edges detected during the edge analysis of said second image with edges detected during the edge analysis of said first image;
discarding edges detected in said first image that are also present in the edges detected in said second image to render a modified first image; and
combining said modified first image and second image to depict edges of said buried structure in said second image.

15. (Previously presented) A method according to claim 14, further comprising correcting said first image by discarding saturated image areas.

16. (Currently amended) A sSystem for obtaining an image of a buried structure in an object, comprising:

a bounded light source for irradiating said object by light for providing a first image of said buried structure and for providing a second visual image of said object;
a camera device for obtaining said first image and second visual image; and
a processing device arranged for:
providing a gradient analysis of said first image to detect edges of said buried structure;
providing a gradient analysis to detect edges in said second image;
comparing edges detected during the gradient analysis of said second image with edges detected during the gradient analysis of said first image;
discarding edges detected in said first image that are also present in the edges detected in said second image to render a modified first image; and
combining said modified first image and second image to depict edges of said buried structure in said second image.

17. (Withdrawn) A system according to claim 16 further comprising:

a puncture tool for puncturing human tissue; and
an IR light source provided in said puncture tool

18. (Withdrawn) A system according to claim 17, wherein said IR light is aligned along said puncture tool.

19. (Withdrawn) A system according to claim 17, wherein said IR light source is provided in a tip of said puncture tool.

20. (Withdrawn) A system according to claim 17, wherein said puncture tool is provided with an IR radiating coating.

21. (Withdrawn) A system according to claim 17, wherein the IR light source and the bounded light source are alternately activated.

22. (Withdrawn) A puncture tool for puncturing human tissue including an IR light source.